



Illinois Environmental Protection Agency

211/782-6760

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY WELL INJECTION PERMIT

Land/Noise Pollution Control
Cabot Corporation
Douglas County
Permit No. 1977-UIC-5-OP

Date Issued: October 8, 1977
Expiration Date: October 8, 1979

Cabot Corporation
Post Office Box 188
Tuscola, Illinois 61953

EPA Region 5 Records Ctr.



298937

Gentlemen:

Permit is hereby granted to Cabot Corporation, Tuscola, Illinois, to operate existing water pollution control facilities for the deep well injection of plant effluent into deep wells No. 2 and No. 1 (as standby only). This permit is based on permit renewal request and documents received by this Agency on July 8, 1977, August 31, 1977, and on previously submitted documents, which described the deep well system prior to and after construction.

This permit renews and replaces Water Pollution Control Permit #1975-EB-1316-OP, dated October 8, 1975, and Supplemental Permit #1975-EB-1316-OP-2, dated February 25, 1976.

This Operation Permit expires on October 8, 1979.

All inquiries should be directed to Mr. Rauf Piskin, Manager, Hydrogeology Unit, Technical Operations Section, Division of Land/Noise Pollution Control.

The Standard Conditions of issuance of the Permit are attached.

The Special Conditions of issuance of this permit are on the following pages.

This permit is issued for the injection of industrial waste at a maximum rate of 300 GPM and at a maximum injection pressure (at the wellhead) 50 psig through No. 2 well or No. 1 well (standby).

The wastes to be injected consist of hydrochloric acid, chloride salts and silicon dioxide particulates from Cabot Corporation; nitric acid, zinc nitrate, trisodium phosphate and aromatic solvent from R. E. Donnelly (averaging 30 tons or 7200 gallons per month); up to 1,900,000 gallons per month from A. E. Staley Manufacturing Company according to conditions of Supplemental Permit #1975-EB-1316-OP-3, dated July 20, 1977.

2200 Churchill Road, Springfield, Illinois 62706

The injection wastes shall be sampled daily (if waste is injected) at the wellhead, and a weekly composite sample made and analyzed. The analysis report shall include suspended solids, total chloride, total dissolved solids, total chlorides, and any parameters which are in significant amounts or which are needed to adequately characterize the wastes.

Monthly operating reports must be submitted in one copy each to the following three addresses:

1. Illinois Environmental Protection Agency
Division of Land/Noise Pollution Control
Technical Operations Section, Hydrogeology Unit
2200 Churchill Road
Springfield, Illinois 62706
2. Illinois State Water Survey
Post Office Box 232
Urbana, Illinois 61801
3. Illinois State Geological Survey
Natural Resources Building
University of Illinois
Urbana, Illinois 61801

The transmittal letter shall indicate that the above three addresses were copied.

The monthly operating reports shall contain as a minimum the following:

1. the total number of hours of injection during each day.
2. the total number of gallons of waste injected each day.
3. the total number of gallons of waste injected during the month and the total number of gallons of waste injected since the well began operation.
4. the maximum injection pressure for each day.
5. the maximum injection rate for each day.
6. the maximum and minimum annulus pressure for each day.
7. analyses from the weekly sampling of the injection waste.
8. the need to add fluid to the annulus of injection wells.
9. at least monthly, the viscosity and specific gravity should be measured, the temperature of the sample at the time of collection and the temperature of the sample at the time of measurement shall be recorded and reported.

10. a summary of any operational difficulties encountered, including reasons for any alarms and a description of any changes in the operation of the deep well systems or wastes injected; if any maintenance is performed during the month, a detailed report shall be submitted, including a written daily description of activities during the rework period, copies of logs run, and a revised well drawing showing casing, injection tubing and downhole appurtenances (showing material description, specifications and model designation, manufacturer, etc.), names and addresses of service companies performing the service function, and Company's consultant name supervising the repair work.

11. once per quarter, a representative set of well operation charts for a one week period shall be submitted along with the monthly report (January, April, July, October).

The injection data shall be reported on forms supplied by this Agency. A permanent record should be kept of all recording charts for deep well instruments. These records should be open to reasonable inspection by appropriate State agencies.

The Hydrogeology Unit, Division of Land/Noise Pollution Control, shall be notified immediately if any situation occurs which could result in pollution to the waters of the State.

SPECIAL CONDITIONS:

This Permit is issued subject to the following Special Conditions. If such Special Conditions require additional or revised facilities, satisfactory engineering plan documents shall be submitted to this Agency for review and approval for the issuance of a Supplemental Permit.

SPECIAL CONDITION #1: The No. 2 well, which was completed in 1976, shall be the main disposal well. The No. 1 well shall be used when an emergency occurs or when the No. 2 is down for repair or maintenance.

SPECIAL CONDITION #2: The No. 1 well shall be tested to determine its operating conditions with the said waste in this permit or, preferably, with water, at least once a month. The test results shall be included in monthly operating reports.

SPECIAL CONDITION #3: Within 30 days of the date of this permit, a testing program shall be completed to determine the condition of the well injection tubing and casing in both wells by the permittee; such a program shall be submitted to the Agency for review and approval.

SPECIAL CONDITION #4: An evaluative report, to indicate the conditions of tested tubings and casings, shall accompany the test results and/or logs when they are submitted to the Agency with monthly operating report.

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SPECIAL CONDITION #5: Monthly operating reports shall include the amounts of waste received from both R. R. Donnelly and A. E. Staley in gallons.

SPECIAL CONDITION #6: Should changing injection conditions so warrant during the term of this permit, the Agency may require modifications of permit conditions or modifications to the deep well injection facilities, including surface works and downhole facilities, to insure the integrity of the system and to insure adequate protection to the waters of the State.

Very truly yours,

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

Thomas E. Cavanagh Jr.

Thomas E. Cavanagh, Jr.
Manager, Permit Section (Land Unit)
Division of Land/Noise Pollution Control

TEC:RP:mat/682,1-4

cc: Illinois State Water Survey
Illinois State Geological Survey
Illinois Department of Mines and Minerals
ORSANCO, Executive Director